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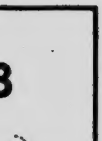

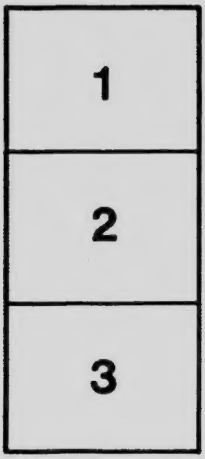

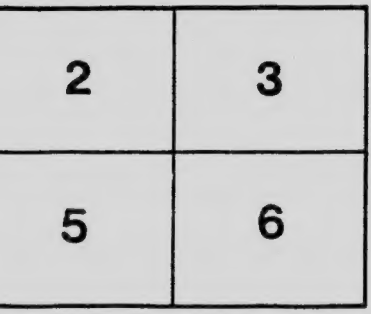

CIRCULAR No. 17

DOMINION OF CANADA

DOMINION EXPERIMENTAL FARMS.

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EVERY GARDENER HIS OWN SEED GROWER.

PART II.

Home Grown Seed of Annual Vegetables.

By W. T. Macoun.

In Part I of "*Every Gardener His Own Seed Grower*," which was issued in 1918 as Special Circular No. 12, information was given in regard to growing seed of biennial vegetables such as beets, carrots, parsnips, onions and cabbage, and in Circular No. 15, published later in the year, directions were given for the "*Selection and Wintering Biennial Vegetables for Seed.*" In this circular, information is given on the saving of seed of annual vegetables, and it is thus hoped to interest many in the growing of their own seeds.

The cost of the seed that is used in planting a vegetable garden is small compared with the returns and if an abundant supply of good seed can be readily bought, as is the case in most parts of Canada where there are settlements, it may not be worth while growing the little that is needed for the home garden. But it is so easy to grow the seed oneself that if, by preventing crossing and making a rigid selection each year, pure seed of a good strain is produced at home, one is surer of having what is required.

Seed of most varieties of vegetables can be grown at home of as good or better quality than is the imported seed, but to ensure having good seed it should be saved from the best plants rather than from those which happen to have been left in the garden unused.

Beans.—Varieties of beans do not, as a rule, cross when grown side by side, hence if one is growing more than two sorts the seed will remain pure. Reserve a few feet of the row for seed, or, better still, mark a few productive plants which are free from disease and do not pick green beans from them. When ripe, pull the plants or pick the pods. Hang up plants in a dry place where there is a good circulation of air to prevent moulding until the beans are dry and hard, or spread out pods for the same purpose. When dry, shell and clean the beans, picking out and discarding those showing disease, and keep in a dry place until spring. It is important to select plants which are free or nearly free from the disease known as rust or anthracnose, which is apparent as brownish patches on the pods, as this disease is carried over winter on the beans and one is liable to have diseased plants again next year.

Corn.—It is quite a common practice in Canada to save sweet corn for seed, but many more persons might do so. Varieties of corn are very readily crossed, as the wind blows the pollen a considerable distance and the pollen of one variety falling on the silk of another fertilizes the flowers, thus ensuring a cross between the two varieties. Unlike most other plants, the effect of the cross so far as the appearance of the grain is concerned is seen the same year, so that if a black variety, such as Black Mexican, pollenizes a yellow variety, like Golden Bantam, there may be both black and yellow kernels on the same ear, or there might be both amber coloured and yellow kernels should Early Malcolm or some other variety with amber-coloured kernels pollenize Golden Bantam. While this crossing makes the ear a little less attractive than if the kernels were all the same colour, it will be found that the quality will not be much affected unless it is crossed with a field corn, and seed can be saved and good results expected the following season though the variety would not be pure and thus there would probably be more difference in the time of maturing and character of ear of each plant. The Golden Bantam has now become so popular that it is often the only variety grown and when this is the case or any other sort is grown and there are no other varieties nearby in other gardens the seed should be fairly pure.

When the corn becomes ready for table use, a few of the earliest and best-developed ears should be marked to be left until ripe for seed. To make sure that the ear is well filled, the husk may be opened somewhat and then closed and held together by a white string tied around the ear, which would also indicate which ears were to be left, or if there were danger from birds, a little gauze tied around the ears would protect them and ensure their ripening. When ripe or when they have to be gathered for fear of frost, the ears are removed from the stalk and hung up where they will dry and harden. There is great danger of moulding if several ears are tied close together, especially when corn has to be harvested before it is fully mature, hence a good plan, when this is the case, is to husk the ears and stick each one separately on a nail driven through a board and far enough apart so the ears will not touch. The board is then hung up in a warm, dry place until the kernels become dry and hard. If kept dry the kernels may be left on the ears all winter, but they could be made safer from mice by shelling them and putting the corn away in a bag or box. Before storing it would be desirable to pick the corn over and keep only the best kernels for planting. A number of persons in Canada now have their own strains of corn which they select each year for earliness, length and shape of ear, productiveness, etc., and find it very desirable to have their own seed.

Cucumbers.—One cucumber will contain enough seed for the wants of the home gardener. A specimen which is typical in shape and colour of the variety grown, or is the shape and colour that the grower would like to maintain, should be left on the vine until it turns yellow, when it is cut open and the seeds spread out thinly and dried and put in an envelope until needed. It is desirable to grow a variety which will stay green on the vine the longest time, hence, where possible, it is well to mark specimens on several vines and learn which stays green longest.

Egg Plant.—The egg plant requires a long and warm season in which to mature and there are many places in Canada where its success is uncertain on this account. No doubt earlier strains could be obtained by careful selections, and if lovers of this delicious vegetable were to save their first ripe specimen each year for seed purposes, no doubt earlier strains would be found. Let the fruit remain on the plant until it is mature, then remove and dry the seed and keep dry until needed.

Lettuce.—Seed is easily obtained from lettuce. Plants to produce seed are grown as if to be used green, but should be thinned out to at least six inches apart, and are left uncut when they head. Soon the seed stalk will be thrown up. One plant will produce more than enough seed for home use, but, to be sure of the seed, it might

be desirable to grow two or three for this purpose. The seed ripens rather unevenly, and in order not to lose any of it, each head should be picked as it shows white, it being necessary to go over the plants every few days; but, as the loss of a little seed is not important, it is easier to wait until a considerable number of heads show white, when the plants are pulled roots and all, the tops pushed into a paper bag which is tied and the plants hung up in a dry place by the roots. Many of the seeds not yet mature will go on ripening. When the plant is quite dry the seed is rubbed out and cleaned and only the best seed is kept.

Melons.—It has been the custom with many farmers and market gardeners to save their own melon seed. When a melon which is of especially good flavour comes to the table, the seeds of it are kept for planting, providing it is of good size, shape and colour for the variety, or an improvement on the general type. Selections are also made for thickness of flesh and small seed cavity. Earliness is an important consideration, and this also is taken into consideration when making a selection, as early vegetables of most kinds bring the highest price. In cleaning the seed, spread it out thinly so that it will dry without moulding. Mice are very fond of melon seeds, hence they, and other seeds, should be kept safe from them.

Parsley.—Parsley will go to seed if the plants are started early. It is desirable to thin the plants to about six inches apart. If they do not seed the first year they will the next, if kept alive over winter.

Peppers.—The pepper, like the egg plant, requires a long, warm season in which to mature, but, if started early the Cayenne, Chili and Cardinal of the smaller peppers and the Early Neapolitan of the large peppers, will mature in many parts of Canada. Seeds of the earliest ripe peppers should be saved, and results from them will be found quite as satisfactory or more satisfactory than from imported seed.

Peas.—A few plants of peas left to mature without picking any green pods from them will furnish enough seed for the garden next year. If the plants can be left until the peas are quite ripe the pods may be picked from the vine in the garden, shelled at once and thoroughly dried by spreading out in a dry place. Sometimes some of the peas are ripe and some are not, and it becomes necessary to pull the plants to make way for someth[illegible] because of wet weather. If this is done, see that the plants are kept in a [illegible] hung up in a dry place until the peas are dry. If the vines are put i[illegible]y should be turned frequently to prevent the peas moulding or sprouting. [illegible]afe to pull the plants and stuff them into cotton bags as the peas are li[illegible]at er grow. Quickness of drying, as with most seed, is important in the case of the pea. Because of the ease in handling and drying small quantities, home-grown pea seed often germinates much better than seed which has been harvested in large quantities and has been difficult to cure. As peas do not, as a rule, cross in the garden when grown side by side, the different varieties can easily be kept pure. If peas are grown year after year for seed purposes it is desirable to give the seed plants a little more room than is usual when grown for green peas so that the individual characteristics of the plants may be readily studied so the earliest or most productive of plants having other desirable characteristics may be readily selected and saved.

Radish.—The radish is one of the easiest plants from which to obtain seed. If the radishes are left unpulled when ready for use they will soon throw up seed stalks, but, as it is desirable to maintain a good type, the best plan is to pull up a few of the best-looking specimens when they are ready for use, cutting off the tops except a few of the smaller leaves at the centre. These selected specimens should be carefully replanted about six inches apart with the crown or top of the radish about an inch below ground.

Spinach.—This is easily grown from seed. Thin the plants or transplant them to six inches apart in the rows and they will soon go to seed if the leaves are not used for salad. Some plants of spinach have male flowers only and do not set seed, but these pollenize the others.

Squash.—A good specimen is allowed to mature on the vine, and then the seeds are taken out and dried. The early varieties of squashes cross very readily, and the early squashes and vegetable marrows will cross with the pumpkin, but they do not cross with the Hubbard squash, nor does the pumpkin.

Tomato.—The seed of tomatoes for home use should be saved from the plant bearing the largest crop of early and best fruit. The tomatoes are cut in half and the pulp pressed out into some vessel, adding about one-third its volume of water. Put in a dark room until fermentation sets in, which will be in about two days, when the seed will separate readily from the pulp. It is then washed out and spread out to dry, but not in the sun. When dry, store in a paper bag or envelope until needed. For saving seed on a larger scale see method described in the Annual Report of the Experimental Farms for 1914.

Kind of Vegetable.	What will Furnish Enough Seed for the Home Garden.	Yield per Plant.	Approximate Number of Seeds per Ounce.	Approximate Quantity of Seed Needed per 100 foot row.
Bean	5 ft.	6 oz. per five feet of ordinary row, or one or more ounces per plant when given more room	60 to 150	8 ounces.
Corn	1 ear	300 to 600 kernels per ear	100 to 200	2 to 4 ounces.
Cucumber	1	1/8 to ½ ounces per specimen	1,000	½ ounce.
Lettuce	3 plants	½ oz. per plant	25,000	1/10 ounce.
Muskmelon	1	1 to 1½ oz. per specimen	1,000 to 1,500	½ ounce.
Pea	5 ft.	4 oz. per five feet of row	50 to 150	12 ounces.
Pepper	1	1/8 to 1/16 oz. per specimen	4,500	Very few seeds.
Radish	3 plants	1 oz. to 1¼ oz. per plant	5,000	1 ounce.
Spinach	3	1½ to 4½ oz. per plant	5,000	½ ounce.
Squash, small seeded	1	½ oz. per specimen	300 to 500	1½ ounce.
Squash, large seeded	1	3 oz. per specimen	150 to 250	1 ounce.
Tomato	3	50 to 300 per specimen	8,000 to 10,000	Very few seeds.
Watermelon	1	2 to 3 oz. per specimen	125 to 150	1 ounce.

More seed is recommended in some cases than is usually necessary, but a second sowing may have to be made for various causes.